2017 Drinking Water Consumer Confidence Report





Featuring Calendar Year 2016 Water Quality Results

Dear Valued Ventura Water Customer,



We are committed to delivering a reliable water supply that meets or exceeds all drinking water quality and health standards 24 hours a day, 7 days a week. We will continue to protect our local water resources and the vitality of Ventura by expanding our water supply, improving water quality, and improving supply reliability.

This report contains the 2016 water quality testing results, background on our local water resources, and information on our continued investment in local water infrastructure.

On behalf of the entire staff, thank you for partnering with us to preserve our local water resources!

Sincerely,

Joe McDermott, Acting General Manager

Massa



Ventura River



Groundwater Wells

Our Commitment to You

- Provide high-quality drinking water
- Reliable water supply systems
- Proactive maintenance
- Customer focused
- Expand and diversify water supply
- Meet or exceed all regulatory standards

Water Quality Report Highlights

- Drinking water met all State and Federal Standards
- Advanced treatment systems that purify our water
- Active water quality monitoring update
- Continuous investment in our infrastructure
- Water Quality Data for 2016

For More Information

Contact Customer Care at (805) 667-6500

We also invite you to express your opinions at Water Commission meetings held on the fourth Tuesday evening of each month in the Community Meeting Room at Ventura City Hall, 501 Poli Street. Please visit www.cityofventura.ca.gov/716 for information on Water Commission meetings.

This report is available in Spanish at www.venturawater.net in library of reports.

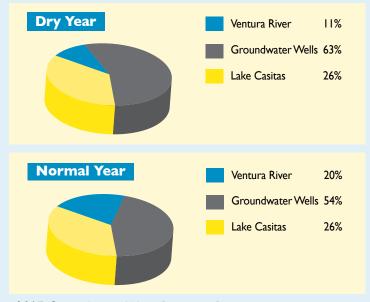
Este informe contiene informagcion muy importante sobre su aqua potable. Traduzcalo o hable con alquin que lo entienda bien. Para mas infomacion o para obtener copias del informe de agua en español llame (805) 667-6500

Trusted life source for generations

www.venturawater.net • Ventura Water 2017 Drinking Water Consumer Confidence Report



Ventura is one of the largest cities in California that relies exclusively on local water supplies. We manage our water portfolio of three distinct sources based on the availability from each source. When more river water is available, less groundwater is used. During dry conditions, groundwater or Lake Casitas supply a greater percentage of your drinking water.



2017 Comprehensive Water Resources Report

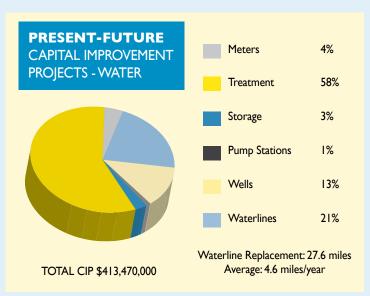
Continuous Investment in our Infrastructure

Since the early days of the Mission, Ventura's water system infrastructure has continually evolved, with major pipeline expansions in the 1950s and 60s and with the purchase of the Saticoy and Mound Water Companies. Today, with three different water supplies, the inter-related infrastructure system is categorized by the State Water Resources Control Board as a "Grade 5," indicating the highest degree of treatment and distribution complexity.

Booster Pump Stations	23
Storage Reservoirs	31
Valves	16,000
Meters	32,000
Fire Hydrants	3,700
Groundwater Wells	10
Lake Casitas Connections	2
Water Treatment Facilities	3
Pressure Zones	14



Ventura Water is committed to investing in the maintenance and improvement of its vital infrastructure. Revenues from water sales allow us to fund the capital improvement work program, which focuses on maintaining aging pipelines and facilities as well as projects to improve water quality. Below is a graph of future water projects to be completed within the next decade.



For more information about the City of Ventura Capital Improvement Plan, please visit the Library of Reports at www.venturawater.net

Water Quality Update



Our Drinking Water met all state and Federal Water quality requirements

Water treatment plants are continuously monitored to ensure that the process is always producing water of high quality.

Ventura owns and operates a fullscale, State-certified laboratory and also uses outside State-certified labs to monitor water quality.

In 2014, Ventura Water met the triennial lead and copper corrosion monitoring requirements by sampling 50 locations to test consumers' tap water. The next testing will be conducted in summer of 2017.

The City has voluntarily tested for specific contaminants along the Ventura River and San Antonio Creak Since 2002 to aid in early identification of emerging water quality concerns.

Ventura Water conducted a Source Water Assessment (DSWAP) in 2013 for each of the drinking water sources serving the Ventura Water system. Sources in this system are considered most vulnerable to the following activities: gas stations, automobile repair shops, sewer collection systems, and metal manufacturing. Contaminants associated with these activities have not been detected in the water supply.

A copy of the assessment may be viewed at: SWRCB, DDW Santa Barbara District Office 1180 Eugenia Place, Suite 200, Carpinteria, CA 93013

You may request a summary of the assessment by contacting: SWRCB, DDW Santa Barbara District Office at (805) 566-1326

Public Health Goals Reporting



As a water supplier, the City must evaluate its drinking water supply every three years with respect to Public Health Goals (PHG). The goals are advisory only and are not mandatory limits, but do require public notification. To fulfill this requirement, a public meeting was held in January 2016 to review the Triennial Public Health Goals Report (visit www.venturawater.net—click the Library of Reports Button). The next Triennial Public Health Goals Report is scheduled to be prepared and presented by July 2019.

Water Supply & Efficiency

As detailed in the 2017 Comprehensive Water Resources Report, our collective ability to find solutions to meet the following supply and water quality challenges will be essential to our water future.

Environmental

Due to concerns for the health of the Ventura River ecosystem, pumping restrictions are limiting how much water and what time of year this water supply is available. Also, as a major supplier of our water, environmental challenges facing Casitas could result in both supply restrictions and higher costs to Ventura Water.

Groundwater

Water allocations from groundwater basins, which are shared regionally, are increasingly regulated and monitored. Our quantity is limited from groundwater sources.

Water from groundwater wells contain higher levels of dissolved solids and minerals than surface waters like Lake Casitas or the Ventura River. While treated groundwater meets all health requirements, its mineralized content results in deposits on plumbing fixtures and less aesthetically pleasing water quality.

Potable Reuse

Pursuing a permanent solution to water supply needs and improving ground water quality, potable reuse is a preferred option for Ventura. VenturaWaterPure, a demonstration facility was tested for over nine months to prove the concept of potable reuse. Potable Reuse treats wastewater with an advanced treatment process and distributes highly purified water to customers.

State Water

Continued years of drought and potential impacts of climate change will require more flexibility and resiliency planning. City Council has approved a plan to help diversify Ventura's water supply with a connection to State Water.

Efficiency

It is our collective responsibility to safeguard our water and use water efficiently in all ways, especially during dry conditions. Ventura Water would like to remind its customers that we remain in a **Stage 3 Water Shortage Event**.

The following activities are prohibited and considered a violation of the City's Water Waste Ordinance.

- Allowing water to run to waste during outdoor use
- Using potable irrigation systems more than two days per week
- Allowing leaks to persist for more than 48 hours
- Using a handheld hose without an automatic shutoff nozzle
- Operating fountains unless the water is recirculating
- Washing or hosing down hardscape surfaces such as driveways and sidewalks
- Irrigating outdoor landscapes during and within 48 hours of measurable rainfall
- Knowingly wasting water in any way

Important Water Treatment Information

Ventura Water and Casitas use chloramines — chemicals that contain chlorine and ammonia for continuous disinfection of the drinking water. Chloramines are preferred because of their ability to provide disinfection over a longer period of time, and improve taste and odor as compared to using chlorine alone. Chloramines have been proven to effectively kill microorganisms while producing lower levels of disinfection byproducts such as trihalomethanes (TTHMs) and haloacetic acids (HAAs), which are potentially harmful constituents. Starting in 2012, large water agencies were required to meet more stringent standards for these byproducts by maintaining and reporting levels at all site specific locations instead of averaging test results system wide.

Drinking water containing these TTHM byproducts in excess of the regulated maximum contaminant level (MCL) may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of cancer. For more information concerning TTHMs, please contact Armando Luna, Water Treatment and Production Supervisor at (805) 652-4574.

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agriculture and livestock operations and wildlife.
- Inorganic contaminants, such as salts and metals that may be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- Pesticides and herbicides from a variety of sources, such as agriculture, urban stormwater runoff and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems.
- Radioactive contaminants that can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the State Water Resources Control Board (SWRCB), Division of Drinking Water (DDW) prescribe regulations that limit the amount of contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

More information about contaminant and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline: 1-800-426-4791

Potential Concerns For Vulnerable Populations

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/



AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline: 1-800-426-4791

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Ventura Water is responsible for providing high quality drinking water, but cannot control the variety of materials used in residential or commercial property plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

Ventura Water and Casitas Municipal Water Distict use chloramines for continuous disinfection of the drinking water and its presence requires additional precautions for some water uses. If a member of your household requires dialysis, you should contact your physician or dialysis service provider to assure proper protective equipment is used during the treatment. If you use tap water for fish or other aquatic animals that use gills for breathing, you need to test and be sure the chloramines are completely removed before use. Setting water in an open container for 24 hours prior to use will not remove all chloramines in the water. Your local pet store can provide information and products for the proper removal of chloramines.



This Consumer Confidence Report (CCR) reflects changes in drinking water regulatory requirements during 2016. All water systems are required to comply with the state Total Coliform Rule. Beginning April 1, 2016, all water systems were also required to comply with the federal Revised Total Coliform Rule. The new federal rule maintains the purpose to protect public health by ensuring the integrity of the drinking water distribution system and monitoring for the presence of microbials (i.e., total coliform and E. coli bacteria). The U.S. EPA anticipates greater public health protection as the new rule requires water systems that are vulnerable to microbial contamination to identify and fix problems. Water systems that exceed a specified frequency of total coliform occurrences are required to conduct an assessment to determine if any sanitary defects exist. If found, these must be corrected by the water system.

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. When this occurs, we are required to conduct assessment(s) to identify and correct any problems that were found during these assessments.

During the past year we were required to conduct one Level 1 assessment. Ventura's water system violated a drinking water standard during the month of October 2016. Although this was not an emergency, as our customers, you have a right to know what happened, and what was done to correct this isolated incident.

What happened:

Ventura Water routinely monitors for drinking water contaminants. During the month of October 2016, 185 water samples were collected to test for the presence of coliform bacteria. Of those samples, 6.5 percent showed the presence of total coliform bacteria. The standard is that no more than 5.0 percent of samples may do so.

On October 19, 2016 Ventura Water staff discovered parts of the distribution system had low disinfectant levels and the presence of coliform bacteria in 2 out of 29 weekly sample site locations.

The affected areas of the distribution system were flushed to remove the water with the low disinfectant levels and some of the repeat samples indicated the presence of coliform bacteria.

The coliform samples that tested positive were located in the midtown area.

What was done:

- Ventura Water staff conducted an investigation to determine the cause of low disinfectant levels.
- Two water storage supply sources were determined to be the cause of the problem. The disinfectant levels were immediately raised in the affected water storage supply sources and the system was flushed to remove the water with low disinfectant levels.
- Subsequent samples were collected after the water with low disinfectant levels was flushed out of the water system and did not show presence of coliform bacteria.
- Ventura Water staff conducted and completed a detailed Level 1 system assessment of the situation.
- Since the occurrence, Ventura Water has implemented added extra precautions to keep disinfectant levels higher in the system to prevent any reoccurrences.

For more information, please contact: Joe Marcinko, Water Utility Manager email: jmarcinko@venturawater.net phone: (805) 652-4504

Water Quality Terminology

The Water Quality Summary shows constituents measured in Ventura's water and reported to the State Department of Health Services, and in some cases the USEPA. Some of the terminology used is described below:

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary (health related) MCLs are set as close to the Public Health Goals (PHGs) or Maximum Contaminant Level Goals (MCLGs) as is economically and technologically feasible. Secondary (aesthetically related) MCLs are set to protect the odor, taste and appearance of drinking water.

Maximum Contaminant Level Goal (MCLG): The level of contaminant in drinking water below which there is no known or expected risk to one's health. MCLGs are set by the USEPA.

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to one's health. The California Environmental Protection Agency sets PHGs.

Maximum Residual Disinfectant Level (MRDL): The maximum level of a disinfectant added for water treatment that may not exceed at the customers tap.

Maximum Residual Disinfectant Level Goal (MRDLG):

The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Primary Drinking Water Standard (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Secondary Drinking Water Standard (SDWS): MCLs for contaminants that affect taste, odor, or appearance of drinking water. Secondary contaminants are not based on health effects at MCL levels.

Regulatory Action Level (RAL): The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements that a water system must follow.

Notification Level (NL): Notification levels are health-based levels established by CDPH for chemicals in drinking water that lack MCLs.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Legend

AL Action Level
RTCR Revised Total Coliform
Rule

ppm* Parts per million or milligrams per liter ppb* Parts per billion or micrograms per liter

pCi/l Picocuries per liter, a measure of radioactivity in water

CMWD Casitas Municipal Water District

UCMR Unregulated Contaminant Monitoring Rule

UMHOS Micro Ohms per Centimeter

< Less than

TT A required treatment technique intended to reduce the level of contaminant in drinking water

NA Not applicable
ND Not detectable

Not detectable

NS No standard

NTU Turbidity, a measure of clarity or cloudiness of water

LRAA Locational Running Annual Average

*If this is difficult to imagine, think about these comparisons: **ppb:**

- On a in all in 10 miles
- One inch in 16 milesOne drop in 14 gallons
- One inch in 16,000 miles
- One drop in 14,000 gallons

Footnotes

- 1 Soil runoff
- 2 Erosion of natural deposits
- 3 Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
- 4 Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
- 5 Discharge from petroleum, glass and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive)
- 6 Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
- 7 Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
- 8 Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
- 9 Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits.
- 10 Leaching from ore-processing sites; discharge from electronics, glass, and drug factories.
- 11 Naturally occurring organic materials
- 12 Runoff/leaching from natural deposits; seawater influence
- 13 Leaching from natural deposits
- 14 Leaching from natural deposits; industrial wastes
- 15 Runoff/leaching from natural deposits
- 16 Substances that form ions when in water; seawater influence
- 17 Runoff/leaching from natural deposits; industrial wastes
- 18 Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. In October 2016, coliforms were found in more samples than allowed and this was a warning of potential problems.
- 19 Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
- 20 Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. In October 2016, we found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occured, we were required to conduct an assessment to identify problems and to correct any problems that were found during these assessment.
- 21 E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely-compromised immune systems.
- (a) Average is maximum reading. Avenue Plant Surface Filtration (TT) = 95% of samples equal or below 0.1 NTU
- (b) Average is maximum reading. CMWD Direct Filtration (TT) = 100% of samples equal or below 0.2 NTU
- (c) Highest running average cannot exceed the MCL
- (d) Samples were taken at selected households on a first draw in August 2014

Ventura's Water Quality Summary 2016 Only water quality constituents detected by laboratory testing appear in the chart.															
Using Data Collected in 2016 Unless Noted															
P	PRIMARY STANDARDS (PDWS) Units Maximum Level		State Goal PHG (MCLG)		Ventura River Average	Ventura River Range		Ground Water Average		Ground Water Range	CMWD Average	CMWD Range	Major Sources of Contamination in Drinking Water (Footnotes)		
Water Clarity Treated Turbidity Radioactive Contaminants Gross Alpha particle activity Uranium (c) 2013, 2016 VTU NTU PCi/I pCi/I			TT 15 20		NA 0 0.43		0.09(a) 2.7 2.05	0.02 - 0.40 2.7 2.05 - 6.2		0.19 10.3 6.2		0.1 - 0.7 5.5 - 14.1 4.1 - 10.1	0.11 ND ND	NA ND ND	2 2
Rad Inor	Radium 226 2009, 2015 pCi/l Radium 228 2009, 2015 pCi/l Inorganic Contaminants			Combined 5 Combined 5		0.05	ND ND	ND ND		ND ND		ND ND	ND ND	ND ND	2 2
Fluc Nitr Sele	Arsenic ppb Fluoride ppm Nitrate (as Nitrogen) ppm Selenium ppb			10 2 10 50		.004 10 30	ND 0.46 1.19 ND Samples	ND 0.4 - 0.56 ND - 1.5 ND		ND 0.48 ND 90th		ND 0.4 - 0.57 ND - 3.1 ND	ND 0.44 ND ND	ND 0.41 - 0.49 ND ND	6 5
Le	Lead and Copper Samples Lead ppb Copper ppb			IS 1300		P HG 0.2 300	Collected 52 52	Ab	ove RAL 0 2	Percent ND 1010	ntile Major Sources of Contami		7	on in Drinking Water	
PRIMARY STANDARDS for Dirstribution System			Units	s MCL		PHG (MCLG)		Distribution System Average		ribution Maj		ijor Sources of Contamination in Drinking Water			Health Effects Language (Footnotes)
	nfection oramine Residual (MRDL)	ppm	(MRDL) 4		(MRDLG) 4	(MRDL)	` '		DL) Drinking wat - 4.4 added for		er disinfecta treatment	nt			
Disi Tot	nfection By Products al Trihalomethanes (LRAA) al Haloacetic Acids (LRAA)	ppb	80 60		NA NA	57.8 37.8		28 - 5 -	72	By-product of drinking water chlorination					
Microbiological Contaminant Total Coliform Bacteria (State) Fecal Coliform & E. coli Bacteria (State) Total Coliform Bacteria (Federal Revised)			NA NA NA	A No more than 5%		0 0 Routine and	0.5% 0	0 - 6. 0		Human and animal fecal waste			18 19 19		
	oli Coloform Bacteria (Federal I	NA		V.	following	E. coli-positive routine sample or system fails to analyz			ils to analyze t	e total coliform-positive repeat sample for E. coli.				20 Major Sources of	
	SECONDARY STANDARDS Units Secondary MCL			River Average		River Range	W	ater erage	Water Range		CMWD Average	СМУ	VD Range	Contamination in Drinking Water (Footnotes)	
Aesthetic Standards	Aluminum Color Odor Chloride Manganese Iron Total Dissolved Solids Specific Conductance Sulfate	ppb Color Threshold ppm ppm ppb ppm umhos ppm	Solor 15 reshold 3 sppm 500 sppm 50 sppb 300 sppm 1000 nhos 1600		149 ND ND 72 ND ND 803 1122 245		ND - 411 ND ND 65 - 81 ND ND 716 - 893 1065 - 1171 231 - 256		ND N		9	ND ND 24 ND ND 408 620 145	35 59	ND ND 21 - 27 ND ND 59 - 508 66 - 640 86 - 156	2 11 11 12 13 14 15 16
pH (recommended 6.5- 8.5) Hardness Calcium Magnesium Langelier Index Sodium Phosphate Potassium Total Alkalinity		pH units ppm ppm ppm No Units ppm ppm ppm ppm	Non (NS NS NS Corrosive(+) NS NS NS		7.8 467 132 34 0.8 52.6 ND 2.4 251	7.3 - 8.0 437 - 484 121 - 139 32 - 35 0.4 - 0.9 50 - 55 ND 2.2 - 2.5 237 - 293		7.3 709 197 52.5 ND 131 ND 4.9 271	7.1 - 7.7 611 - 770 159 - 227 48 - 59.8 ND 96 - 158 ND - 0.64 4.5 - 5.8 229 - 317	1	7.4 242 55 26 -0.15 31 <0.20 2.9 141	(-)0 22 (-)0 2 <0.	.2 - 7.6 .25 - 254 .49 - 59 .25 - 26 .33-0.04 .29 - 33 .20 - 0.21 .7 - 3.0 .28 - 149	Note: The Ventura Water System was in compliance with disinfectant inactivation requirements at all times.

Notification Level 1000 800

ppb ppb ppb ppb ppb ppb ND 175

0.131

5.15

725

ND

0.63

ND 100 - 250

0.092 - 0.17

5.10 - 5.20 250 - 1200

ND

0.61 - 0.65

ND 295

ND

14

800

0.00017

0.485

ND ND - 590

ND

ND

ND - 1600

ND - 0.00017

0.29 - 0.68

327 ND

ND

ND

ND

ND

ND

110-810 ND

ND

ND

ND

ND

ND

UCMR

Boron Chlorate (2013)

Chromium 6 (2013)

Molybdenum (2013) Strontium (2013)

Testosterone (2013)

Vanadium (2013)



In compliance with the Americans with Disabilities Act, this document is available in alternate formats by calling 805-667-6500 or by contacting the California Relay Service. / De acuerdo con el Acto de Americanos con Incapacidades, este documento está disponible en formatos alternativos llamando al 805-667-6500 o el Servicio de Retransmisión de California.